

Fluid Levels and Service Intervals Low Fluid Level Causes Power Transfer Unit Failure

How much attention do you give to fluid levels or the condition of a lubricant when performing a service on your customer's vehicle? Are you accurately checking those fluid levels and recommending fluid flushes or exchanges, where applicable? Unfortunately, many service technicians fall into a pattern of just performing lubrication services requested by the customer, which is usually triggered by a service reminder light indicating that it is time for an oil and filter change. The lube service technician should be the service reminder light. We must get into a pattern of performing a complete maintenance inspection and advising the customer of additional needed services. Failure to provide that service can be costly for the vehicle owner. Read on to determine how a minor leak can result in a catastrophic failure.

Failed Power Transfer Unit

The owner of the Nissan Murano had noticed an oil stain on her carport floor and had brought it to her husband's attention. He failed to address the concern until it was too late, resulting in some major expensive repairs. The shop responsible for a recent service on the vehicle had also failed the customer, as it was obvious the Power Transfer Unit (PTU) had been leaking.

The Murano was an All-Wheel Drive (AWD) vehicle fitted with a transfer case, which applies power to the rear wheels on-demand. The Altima, Pathfinder, and Rogue utilize this same arrangement. With this system there is not a large margin for error when it comes to lubricant. A minor leak can result in a catastrophic failure of the unit, considering the capacity of the transfer case is only 5/8 pt. (0.31L) of 80/90 gear lube (non-synthetic). That is approximately a coffee cup of lubricant to protect the gears and bearings. A minor loss of lubricant can result in some major expensive repairs at a cost of approximately \$3,000 to replace the power transfer unit (PTU). Any evidence of leakage should be treated as a major concern. The failure can be worse than the cost to replace the PTU, as a total front wheel lock-up symptom can occur due to loss of lubricant, resulting in bearing

and gear failure. That encounter would certainly test your driving skills, especially if the vehicle was traveling 60 mph when the wheel lock-up occurred.

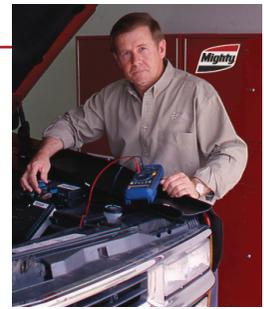
With leakage present, some vehicle owners continue to operate their vehicle due to the cost of the repairs. Labor time to pull the transfer case for seal replacement is 10.8 hours. A transfer case rebuild reflects 15.7 labor hours. The seals on the right-hand side (passenger side) can be replaced without pulling the transfer case. The seal that is viewed where the right-hand axle enters the transfer case is only a dust seal. The seal promoting the leakage is positioned beyond the mentioned dust seal and is referred to as the driveshaft oil seal/ring gear shaft oil seal. Nissan has some specialty tools to remove the seals on the right-hand side without removing the transfer case. Seal leakage next to the transmission will require pulling the transfer case for seal replacement. Treat a transfer case leak as a major condition that must receive immediate attention.

Service Recommendations

Often, we get into a pattern of only inspecting and recommending services that we specialize in. The customer assumes that we are performing all required services and performing a full inspection on their vehicle. This results in a lot of needed services and checks not being performed, resulting in some costly repairs.

Make it your policy to perform a thorough inspection on every vehicle that passes through your shop for service or repair. Provide your customer with your service recommendations, even if the repairs may not be your specialty, requiring the service of another facility. They will appreciate the attention and service recommendations. Take time to fully explain the inspection results and your recommendations.

Contact your Mighty representative to take advantage of his product offering, service recommendations, specialty equipment and training.



By Larry Hammer
Technical Services



AS HER CAR EXPERIENCES A COMPLETE WHEEL LOCK-UP, JOAN THINKS OH-SO-FONDLY OF THE TECH WHO FAILED TO PERFORM A COMPLETE MAINTENANCE INSPECTION